

CLAIMS

What is claimed is:

1. A method of controlling a cryopump, the method comprising:
5 setting an identifier when a temperature is below an operational set point;
 and
 if an identifier has been set, responding to a temperature that is above a
 warmup set point by directing a purge valve to open.
2. A method of controlling a cryopump as in Claim 1 wherein directing a purge
10 valve to open includes at least one of:
 causing a cryo-purge valve coupled to the cryopump to open; and
 causing an exhaust purge valve coupled to an exhaust line of the
 cryopump to open.
3. A method of controlling a cryopump as in Claim 1 wherein the operational set
15 point is 18K.
4. A method of controlling a cryopump as in Claim 1 wherein the warmup set point
 is above 34K.
5. A method of controlling a cryopump as in Claim 1 wherein causing a purge
20 valve to comprises delivering purge gas into the cryopump without initiating an
 entire regeneration process.
6. A cryopump controller which is programed with instructions for:
 setting an identifier when a temperature is below an operational set point;
 and

if an identifier has been set, responding to a temperature that is above a warmup set point by directing a purge valve to open.

7. A cryopump controller as in Claim 6 wherein the instructions for directing a
5 purge valve to open include instructions for at least one of:
causing a cryo-purge valve coupled to the cryopump to open; and
causing an exhaust purge valve coupled to an exhaust line of the
cryopump to open.
8. A cryopump controller as in Claim 6 wherein the operational set point is 18K.
- 10 9. A cryopump controller as in Claim 6 wherein the warmup set point is above
34K.
10. A cryopump controller as in Claim 6 wherein directing a purge valve to open
comprises delivering purge gas into the cryopump without initiating an entire
15 regeneration process.
11. A cryopump comprising:
a controller in communication with the cryopump, the controller
including instructions for:
setting an identifier when a temperature is below an operational
20 set point; and
if an identifier has been set, responding to a temperature that is
above a warmup set point by directing a purge valve to open.
12. A cryopump as in Claim 11 wherein the instructions for directing a purge valve
to open include instructions for at least one of:
25 causing a cryo-purge valve coupled to the cryopump to open; and

causing an exhaust purge valve coupled to an exhaust line of the cryopump to open.

13. A cryopump as in Claim 11 wherein the operational set point is 18K.

14. A cryopump as in Claim 11 wherein the warmup set point is above 34K.

5

15. A cryopump as in Claim 11 wherein directing a purge valve to open comprises delivering purge gas into the cryopump without entering into an entire regeneration process.

10 16. A system for controlling a cryopump, the system comprising:
a means for setting an identifier when a temperature is below an operational set point; and
a means for responding to a temperature that is above a warmup set point by directing a purge valve to open when an identifier has been set.

15